

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A processor-based method, comprising:
selecting a set number of functions correlating variable parameters of a dataset; and
clustering the dataset by iteratively applying a regression algorithm and a K-Harmonic Means performance function on the set number of functions to determine a pattern in said dataset;
wherein said clustering comprises determining distances between data points of the dataset and values correlated with the set number of functions, regressing the set number of functions using data point probability and weighting factors associated with the determined distances, calculating a difference of harmonic averages for the distances determined prior to and subsequent to said regressing, and repeating said regressing, determining and calculating upon determining the difference of harmonic averages is greater than a predetermined value.
2. (Canceled).
3. (Original) The processor-based method of claim 2, wherein said determining the distances comprises determining distances from each datapoint of the dataset to values within each function of the set number of functions.
4. (Original) The processor-based method of claim 2, wherein said selecting and said clustering are conducted for a plurality of datasets each from a different data source.

5. (Original) The processor-based method of claim 4, wherein said selecting and said clustering are conducted in parallel for each of the plurality of datasets.

6. (Original) The processor-based method of claim 4, further comprising determining a common coefficient vector to compensate for variations between similar sets of functions within the different data sources.

7. (Original) The processor-based method of claim 6, wherein said determining the common coefficient vector comprises:

developing matrices from the dataset datapoints and the probability and weighting factors for each of the datasets prior to said reiterating;
and

determining the common coefficient vector from a composite of the developed matrices.

8. (Original) The processor-based method of claim 7, further comprising multiplying the similar sets of functions within the different data sources by the common coefficient vector.

9. (Previously presented) A storage medium comprising program instructions executable by a processor for:

selecting a set number of functions correlating variable parameters of a dataset;

determining distances between datapoints of the dataset and values correlated with the set number of functions;

calculating harmonic averages of the distances;

regressing the set number of functions using datapoint probability and weighting factors associated with the determined distances;

repeating said determining and calculating for the regressed set of functions;

computing a change in harmonic averages for the set number of functions prior to and subsequent to said regressing; and
reiterating said regressing, repeating and computing upon determining the change in harmonic averages is greater than a predetermined value to thereby determine a pattern in said dataset.

10. (Original) The storage medium of claim 9, wherein the program instructions are executable using a processor for computing the datapoint probability and weighting factors.

11. (Original) The storage medium of claim 9, wherein the program instructions are executable using a processor for developing matrices from the dataset datapoints and the probability and weighting factors prior to said reiterating.

12. (Original) The storage medium of claim 11, wherein the program instructions are executable using a processor for amassing matrices developed from a plurality of datasets each from a different data source.

13. (Original) The storage medium of claim 11, wherein the program instructions are executable using a processor for determining a common coefficient vector from the composite of matrices.

14. (Original) The method of claim 13, wherein the program instructions are executable using a processor for multiplying similar sets of functions within the different data sources by the common coefficient vector.

15. (Currently amended) A system, comprising:
an input port configured to receive data; and
a processor configured to:
 regress functions correlating variable parameters of a set of the
 data;
 cluster the functions using a K-Harmonic Mean performance
 function; and
 repeat said regress and cluster sequentially to thereby determine a
 pattern in said set of data;
wherein the processor clusters the functions by determining distances
between data points of the dataset and values correlated with a set
number of functions, regressing the set number of functions using
data point probability and weighting factors associated with the
determined distances, calculating a difference of harmonic
averages for the distances determined prior to and subsequent to
said regressing.
16. (Original) The system of claim 15, wherein the processor is arranged
within one of a plurality of data sources each comprising a processor configured
to:
 regress the functions on a dataset of the respective data source;
 cluster the functions using a K-Harmonic Mean performance function; and
 repeat said regress and cluster sequentially.
17. (Original) The system of claim 15, further comprising a central station
coupled to the plurality of data sources, wherein the central station comprises a
processor configured to compute common coefficient vectors which compensate
for variations between the regressively clustered functions representing the
datasets, and wherein each of the processors of the data sources is configured to
alter the functions by the common coefficient vectors.

18. (Currently amended) A system, comprising:
- a plurality of data sources; and
 - a means for regressively clustering datapoints from the plurality of data sources without transferring data between the plurality of data sources to thereby determine a pattern in data contained in said data sources and for applying a K-Harmonic Means performance function on the data;
- wherein the means for regressively clustering the datasets comprises a storage medium with program instructions executable using a processor for selecting a set number of functions correlating variable parameters of a dataset, determining distances between data points of the dataset and values correlated with the set number of functions, regressing the set number of functions using data point probability and weighting factors associated with the determined distances, calculating a difference of harmonic averages for the distances determined prior to and subsequent to said regressing; and reiterating said regressing, determining and calculating upon determining the difference of harmonic averages is less than a predetermined value.

19.-21. (Canceled).

22. (Original) The system of claim 18, further comprising a central station communicably coupled to the plurality of data sources, wherein the means is further for:
- collecting dataset information at the central station from the plurality of data sources;
 - determining a common coefficient vector from the collected dataset information; and
 - altering datasets within the plurality of data sources by the common coefficient vector.

23. (Canceled).

24. (Currently amended) A system, comprising:
a plurality of data sources each having a processor configured to access datapoints within the respective data source; and
a central station coupled to the plurality of data sources and comprising a processor, wherein the processors of the central station and plurality of data sources are collectively configured to mine the datapoints of the data sources as a whole without transferring all of the datapoints between the data sources and the central station to thereby determine a pattern in datapoints contained in said data sources;

wherein the each of the processors within the plurality of data sources is configured to regressively cluster a dataset within the respective data source;

wherein the processor within the central station is configured to:

collect information pertaining to the regressively clustered datasets;
based upon the collected information, calculate common coefficient vectors which balance variations between functions correlating similar variable parameters of the regressively clustered datasets;

compute a residual error from the common coefficient vectors;
propagate the common coefficient vectors to the data sources upon computing a residual error value greater than a predetermined value; and

send a message to the data sources to terminate the regression clustering of the datasets upon computing a residual error value less than a predetermined value.

25.-27. (Canceled).

28. (Currently amended) A processor-based method for mining data, comprising:

independently applying a regression clustering algorithm to a plurality of distributed datasets by determining distances between data points of each dataset and values correlated with a set number of functions, regressing the set number of functions using data point probability and weighting factors associated with the determined distances, calculating a difference of harmonic averages for the distances determined prior to and subsequent to application of said regression algorithm, and repeating said regressing, determining and calculating upon determining the difference of harmonic averages is greater than a predetermined value;

developing matrices from probability and weighting factors computed from the regression clustering algorithm, wherein the matrices individually represent the distributed datasets without including all datapoints within the datasets;

determining global coefficient vectors from a composite of the matrices;
and

multiplying functions correlating similar variable parameters of the distributed datasets by the global coefficient vectors to thereby determine a pattern in said datasets.

29. (Original) The processor-based method of claim 28, further comprising repeating said independently applying, said developing, said determining and said multiplying.

30. (Original) The processor-based method of claim 28, further comprising calculating a residue error associated with the global coefficients prior to said multiplying.